

Proposal to the IGBC from
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Proposal:

Revise Section 603.1.1 as follows:

603.1.1 Simulated performance-based approach. Compliance based on simulated performance requires that a proposed building (proposed design) be shown to have an annual energy use based on ~~site energy~~ source energy expressed in consistent units of Btuh/ft², W/ft² or W/m² of *conditioned floor area*, that is less than or equal to the annual energy use of the *standard reference design*. ~~The site energy~~ Source energy use shall include all energy used for building functions covered by this code plus the energy consumed in the extraction, processing and transport of primary fuels such as coal, oil and natural gas; plus, the energy losses incurred in the generation, transmission and distribution of electrical power; less any renewable energy produced by onsite energy generation sources. The source energy multiplier for electricity shall be 3.16. The source energy multiplier for fuels other than electricity shall be 1.1.

Reasons:

The document should be returned to the text that appeared in the first two versions of the First Draft for these reasons:

1. Utilizing source energy rather than site energy would bring the requirements of the code into closer alignment with its stated intent. Section 101.3 states that the purpose of the document is to “reduce the negative potential impacts and increase the positive potential impacts” on “conservation of natural resources, materials and energy.” By utilizing source energy rather than site energy, the IGBC can be the first code to address our nation’s natural energy resources in the most effective manner available.
2. In response to a request from the Department of Energy (DOE), the National Research Council (NRC) conducted a study to determine whether the use of site-based or source-based measures of energy efficiency would be better in helping the nation achieve its energy conservation goals. A letter summarizing the study was written May 15 of this year and the following quote is taken from it:

“The committee’s primary general recommendation is that DOE/EERE consider moving over time to the use of a full-fuel-cycle measure of energy consumption for assessment of national and environmental impacts.”

Also:

“Full-fuel-cycle measure of energy consumption includes in addition to site energy use, the energy consumed in the extraction, processing and transport of primary fuels such as coal, oil and natural gas; energy losses in thermal

combustion in power-generation plants; and energy losses in transmission and distribution to homes and commercial buildings.”

3. The source energy multipliers are taken from the first two versions of Draft 1. A thorough effort should be undertaken to research the best available information and refine the multipliers if necessary. I volunteer to assist in that effort.